

DE 1A

REMARKS

Claims 20-25 are pending the application; Claims 20-25 stand rejected. Claims 20-23 are amended, support for the amendments can be found in the specification as originally filed and no new matter has been added. Claims 24 and 25 are cancelled.

CLAIMS 20, 22 AND 24 REJECTED UNDER 35 USC 102(e)

Claims 20, 22 and 24 are rejected under 35 USC 102(e) as allegedly anticipated. Claims 20 and 22 are amended to recite 'a combination of Gingko Biloba, Ginseng, and plant matter from a plant of the genus *Uncaria*, species *tomentosa*'. Claim 24 is cancelled.

MPEP section 2111.01 states that during examination, the words of the claims are given their plain meaning unless the applicant has provided a clear definition in the specification and then the claims must be interpreted as broadly as their terms reasonably allow. "Plain meaning" is also defined in MPEP section 2111.01 as the meaning the term would have to a person of ordinary skill in the art in question at the time of the invention. Plain meaning can be provided by dictionary definitions so long as the definition is consistent with the context of word usage in the specification.

Therefore, for claims to be construed, the plain meaning of the claims' terms is first determined and then, after all terms have definition, the claim as a whole is interpreted and given scope.

Hastings discloses a composition for promoting healthy joints which includes, among other components, plant extracts of ashwangandha (*Withania sominfera*), also known as Indian ginseng. In contrast, the claimed invention is directed to a composition for disrupting amyloid fibrils comprising of, among other components, Ginseng. 'Ginseng' is not defined in the specification of the pending application and Applicant therefore submits that according to MPEP section 2111.01, this term should be given its plain meaning. The person of ordinary skill in the art in question at the time of the invention would look to the plain dictionary meaning of the word. The definition of Ginseng from several sources is provided below. As requested, paper copies of the definitions are attached as supporting evidence in 'Appendix' section.

The definition of 'Ginseng' according to:

1. Concise Oxford Dictionary - 1. a plant tuber credited with various tonic and medicinal properties. 2. the plant from which this tuber is obtained, native to east Asia and North America, [Genus *Panax*: several species]
2. Encyclopedia Britannica Online – Either of two herbs of the family Araliaceae or their roots, which have long been used as a drug in East Asia and as the ingredient for a stimulating tea. *Panax quinquefolium*, the North American ginseng, is native from Quebec and Manitoba southward to the coasts of the Gulf of Mexico.
3. Yourdictionary.com – any of several perennial herbs (genus *Panax*) of the ginseng family, with thick, forked, aromatic roots, esp. a Chinese species (*P.pseudoginseng*) and a North American species (*P.quinquefolium*)
4. Wikipedia.org – Ginseng refers to species within *Panax*, a genus of 11 species of slow growing perennial plants with fleshy roots, in the family Araliaceae. They grow in the Northern Hemisphere in eastern Asia (mostly northern China, Korea, and eastern Siberia), typically in cooler climates; *Panax vietnamensis*, discovered in Vietnam, is the southernmost ginseng found. This article focuses on the Series *Panax* ginsengs, which are the adaptogenic herbs, principally *Panax ginseng* and *Panax quinquefolius*. Ginseng is characterized by the presence of ginsenosides.

The definitions provided are all in agreement and all make specific reference to the fact that ginseng includes generally plants of the family, Araliaceae, and/or more specifically plants of the genus, *Panax*. Furthermore the definitions provided do not conflict with the context of use of the term 'Ginseng' in the specification or the claims of the pending application. Thus the plain meaning of the term 'Ginseng' is herbs in the family Araliaceae and/or specifically plants of the genus, *Panax*.

An excerpt from Wikipedia.com (please see attached copy in Appendix) describes Ashwagandha as (*Withania somnifera*), also known as Indian ginseng, Winter cherry, Ajagandha, Kanaje Hindi and Sann Al Ferakh, is a plant in *Solanaceae* or nightshade family. Ashwagandha (*Withania somnifera*), although commonly known as Indian ginseng, is in fact a member of the nightshade or *Solanaceae* family.

Applicant respectfully submits that the person skilled in the art, upon reading the term 'Ginseng' in the context of the claims would understand what plants would reasonably be considered to be included in the definition of Ginseng, i.e. plants of the family, Araliaceae, and/or the genus, *Panax* and certainly not plants that lie outside the family Araliaceae. Applicant traverses the rejection on the basis that the 'plain meaning' of 'Ginseng' as defined above has not been fully considered.

Once the plain meaning of the claims' terms is determined, then the claim as a whole is interpreted and given scope. MPEP 2111.01 states that "claims must be interpreted *as broadly as their terms reasonably allow*". Given the plain meaning of the term 'Ginseng' to include plants of the family, Araliaceae, and/or the genus, *Panax*, the broadest interpretation that the term 'Ginseng' *reasonably allows* is all plants belonging to the family Araliaceae. Applicant submits that to include within the scope of the claim, the plant Ashwangandha is not a reasonable interpretation given the plain meaning of 'Ginseng' as such inclusion actually confounds the plain dictionary meaning of 'Ginseng'.

Applicant submits that as ashwangandha (*Withania sominifera*), does not fall within the plain dictionary meaning of 'Ginseng' and would not be *reasonably* considered to be included in the broadest interpretation of claims 20 and 22 given the definition of the term 'Ginseng'. Hastings does therefore not anticipate the claimed invention and Applicant respectfully requests that the rejection be withdrawn.

CLAIMS 20 TO 25 STAND REJECTED UNDER 35 USC 103(a)

Claims 20 to 25 stand rejected under 35 USC 103(a) as allegedly obvious in view of Hastings in combination with Hsia. Claims 20 and 22 have been amended as discussed above. Claims 21 and 23 have been amended to recite 'plant of the genus *Uncaria*, species *tomentosa*, Dong Quai and Gingko Biloba, in combination...' Claims 24 and 25 are cancelled.

As neither Hastings nor Hsia, alone or in combination disclose neither 'Ginseng', nor 'Dong Quai', Applicant respectfully requests that the obviousness rejection be withdrawn taking into consideration, the claims as amended.

**CLAIMS 20 TO 25 REJECTED UNDER OBVIOUSNESS-TYPE DOUBLE
PATENTING**

Claims 20 to 25 stand provisionally rejected under the judicially created doctrine of obviousness-type double patenting. Applicant submits that a terminal disclaimer will be timely filed once allowable subject matter is indicated.

Applicant believes it has responded fully to all of the concerns expressed by the Examiner in the Office Action. Applicant respectfully requests reexamination of all rejected claims and early favorable action on them. If the Examiner has any further concerns, Applicant requests an immediate call to Rebecca Eagen at (425) 823-0400 ext. 39.

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Respectfully submitted,


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APPENDIX

The Concise Oxford Dictionary

TENTH EDITION

Edited by

Judy Pearsall

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DERIVATIVES **gimpy** adj.

ORIGIN 1920s: of unknown origin.

gin' ● n. 1 a clear alcoholic spirit distilled from grain or malt and flavoured with juniper berries. 2 (also **gin rummy**) a form of the card game rummy.
ORIGIN C18: abbrev. of **GENEVE**.

gin' ● n. 1 a machine for separating cotton from its seeds. 2 a machine for raising and moving heavy weights. 3 a trap for catching small game. ● v. (**ginned**, **ginning**) treat (cotton) in a gin.

DERIVATIVES **ginner** n. **ginnery** n.

ORIGIN ME (in the sense 'a tool or device, a trick'): from OFr. *engin* (see **ENGINE**).

gin' ● n. Austral. offensive an Aboriginal woman.

ORIGIN from Dharuk *diyin* 'woman, wife'.

ginger ● n. 1 a hot, fragrant spice made from the rhizome of a plant. 2 a SE Asian plant, resembling bamboo in appearance, from which ginger is taken. [*Zingiber officinale*.] See also **WILD GINGER**. 3 a light reddish-yellow colour. 4 spirit; mettle. ● v. 1 [usu. as adj. **gingered**] flavour with ginger. 2 (**ginger someone/thing up**) stimulate or enliven someone or something.

DERIVATIVES **gingery** adj.

ORIGIN OE *gingifer*, conflated in ME with OFr. *gingimbre*, from med. L. *gingiber*, from Gk *zingiberis*, from Pali *singivera*, of Dravidian origin.

ginger ale (also **ginger beer**) ● n. an effervescent, sometimes alcoholic drink flavoured with ginger.

gingerbread ● n. 1 cake made with treacle or syrup and flavoured with ginger. 2 informal fancy decoration on a building.

PHRASES **take the gilt off the gingerbread** make something no longer attractive or desirable.

ORIGIN ME, from OFr. *gingembrat*, from med. L. *gingibratum*, from *gingiber* (see **GINGER**).

ginger group ● n. chiefly Brit. a highly active faction within a party or movement that presses for stronger action on a particular issue.

gingerly ● adv. in a careful or cautious manner. ● adj. showing great care or caution.

DERIVATIVES **gingerliness** n.

ORIGIN C16 (in the sense 'daintily, mincingly'): perh. from OFr. *gensor* 'delicate', compar. of *gent* 'graceful', from L. *gentius* '(well-) born'.

ginger nut ● n. a hard ginger-flavoured biscuit.

gingham /'gɪŋəm/ ● n. lightweight plain-woven cotton cloth, typically checked.

ORIGIN C17: from Du. *gingang*, from Malay *genggang* (orig. an adj. meaning 'striped').

gingili /'dʒɪndʒɪli/ ● n. (in Indian cookery) sesame.

ORIGIN from Hindi and Marathi *jīlī*, from Arab. *juljulan*.

gingival /dʒɪn'dʒɪv(ə)l/ ● adj. Medicine concerned with the gums.

ORIGIN C17: from L. *gingiva* 'gum' + -AL.

gingivitis /dʒɪndʒɪ'vaɪtɪs/ ● n. Medicine inflammation of the gums.

ginglymus /'gɪŋɡlɪməs/ ● n. (pl. **ginglymi** /-maɪ/) Anatomy a hinge-like joint such as the elbow or knee.

ORIGIN C16: mod. L., from Gk *ginglymos* 'hinge'.

gink /gɪŋk/ ● n. informal, chiefly N. Amer. a foolish or contemptible person.

ORIGIN C20: of unknown origin.

ginkgo /'gɪŋkəʊ, 'gɪŋkəʊ/ (also **ginkgo**) ● n. (pl. -oes or -os) a deciduous Chinese tree related to the conifers, with fan-shaped leaves and yellow flowers. [*Ginkgo biloba*.]

ORIGIN C18: from Japanese *ginkyō*, from Chin. *yǐnxing*.

gin mill ● n. N. Amer. informal a seedy nightclub or bar.

ginnel /'gɪn(ə)l/ ● n. N. English a narrow passage between buildings; an alley.

ORIGIN C17: perh. from Fr. *chenel* 'channel'.

ginormous ● adj. Brit. informal extremely large.

ORIGIN 1940s (orig. military sl.): blend of **GIANT** and **ENORMOUS**.

ginseng /'dʒɪnsɛŋ/ ● n. 1 a plant tuber credited with various tonic and medicinal properties. 2 the plant from

which this tuber is obtained, native to east Asia and North America. [Genus *Panax*: several species.]

ORIGIN C17: from Chin. *rénshēn*, from *rén* 'man' + *shēn*, a kind of herb (because of the supposed resemblance of the forked root to a person).

ginzo /'gɪnzəʊ/ ● n. US informal, derogatory a person of Italian descent.

ORIGIN C20: perh. from US sl. *Guinea*, denoting an Ital. or Sp. immigrant.

gip ● n. variant spelling of **GYP**.

gippo ● n. variant spelling of **GYPPO**.

gippy tummy /'dʒɪpɪ/ ● n. Brit. informal diarrhoea affecting visitors to hot countries.

ORIGIN 1940s: *gippy*, abbrev. of **EGYPTIAN**.

gipsy ● n. variant spelling of **GYPSY**.

giraffe ● n. (pl. same or **giraffes**) a large African mammal with a very long neck and forelegs, the tallest living animal. [*Giraffa camelopardalis*.]

ORIGIN C16: from Fr. *girafe*, Ital. *giraffa*, or Sp. and Port. *girafa*, based on Arab. *zarīfa*.

girandole /'dʒɪr(ə)ndəʊl/ ● n. a branched support for candles or other lights.

ORIGIN C17: from Fr., from Ital. *girandola*, from *girare* 'gyrate, turn'.

girasol /'dʒɪrəsəl, -səʊl/ (also **girasole** /-səʊl/) ● n. 1 a kind of opal reflecting a reddish glow. 2 North American term for **JERUSALEM ARTICHOKE**.

ORIGIN C16 (in the sense 'sunflower'): from Fr., or from Ital. *girasole*, from *girare* 'to turn' + *sole* 'sun'.

gird' ● v. (past and past part. **girded** or **girt**) poetic/literary, 1 encircle or secure with a belt or band. 2 (often in plur. **gird one's loins**) prepare and strengthen oneself for what is to come.

ORIGIN OE *gyrdan*, of Gmc origin; rel. to **GIRDLE** and **GIRTH**.

gird' archaic ● v. make cutting or critical remarks. ● n. a cutting or critical remark; a taunt.

ORIGIN ME (in the sense 'strike, stab'): of unknown origin.

girder ● n. a large metal beam used in building bridges and large buildings.

ORIGIN C17: from **GIRO** in the archaic sense 'brace, strengthen'.

girdle ● n. 1 a belt or cord worn round the waist. 2 a woman's elasticated corset extending from waist to thigh. 3 the part of a cut gem dividing the crown from the base and embraced by the setting. 4 a ring made around a tree by removing bark. ● v. 1 encircle with a girdle or belt. > surround; encircle. 2 kill (a tree or branch) by cutting through the bark all the way round.

DERIVATIVES **girdler** n.

ORIGIN OE *gyrdel*, of Gmc origin; rel. to **GIRO** and **GIRTH**.

girdle ● n. Scottish and northern English term for **GRIDDLE** (in sense 1).

girl ● n. 1 a female child. 2 a young or relatively young woman. > (**girls**) informal women who mix socially or belong to a group or team. > a person's girlfriend. 3 dated a female servant.

DERIVATIVES **girlhood** n. **girlish** adj. **girlishly** adv. **girlishness** n.

ORIGIN ME (denoting a child or young person of either sex); perh. rel. to Low Ger *gūr* 'child'.

girlfriend ● n. a person's regular female companion in a romantic or sexual relationship. > a woman's female friend.

Girl Guide ● n. a member of the Guides Association.

grrle ● n. (also **grrly**) (pl. -les) informal a girl or young woman. ● adj. 1 (usu. **grrly**) often derogatory like or characteristic of a girl. 2 depicting nude or partially nude young women in erotic poses: **grrle magazines**.

Girl Scout ● n. a girl belonging to the Scout Association.

girn ● v. variant spelling of **GURN**.

giro /'dʒaɪrəʊ/ ● n. (pl. -oes) 1 a system of electronic credit transfer involving banks, post offices, and public utilities. 2 a cheque or payment by giro, especially a social

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Either of two herbs of the family Araliaceae or their roots, which have long been used as a drug in East Asia and as the ingredient for a stimulating tea. *Panax quinquefolium*, the North American ginseng, is native from Quebec and Manitoba southward to the coasts of the Gulf of Mexico.

Asian ginseng (*P. schinseng*) is native to northeastern China and Korea and is cultivated in Korea and Japan. Ginseng has a sweetly aromatic flavour. Its root has long been regarded by the Chinese as a panacea for illness; its purported effects include improved mental performance, ability to learn, and memory and sensory awareness.

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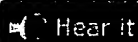
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ginseng definition

gin·seng· (jin'sen')**adjective**

designating a family (Araliaceae, order Apiales) of dicotyledonous plants, shrubs, and trees, usually having flat clusters of small, white or greenish flowers and, often, fragrant leaves, including Hercules'-club and English ivy

Etymology: Chin *jēn shēn* < *jēn*, man (from the shape of the root) + *shēn*, the constellation Orion

noun

1. any of several perennial herbs (genus *Panax*) of the ginseng family, with thick, forked, aromatic roots, esp. a Chinese species (*P. pseudoginseng*) and a North American species (*P. quinquefolium*)
2. such a root, or a preparation made from it, used as a tonic

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Ginseng

From Wikipedia, the free encyclopedia

Ginseng refers to species within *Panax*, a genus of 11 species of slow-growing perennial plants with fleshy roots, in the family Araliaceae. They grow in the Northern Hemisphere in eastern Asia (mostly northern China, Korea, and eastern Siberia), typically in cooler climates; *Panax vietnamensis*, discovered in Vietnam, is the southernmost ginseng found. This article focuses on the Series *Panax* ginsengs, which are the adaptogenic herbs, principally *Panax ginseng* and *Panax quinquefolius*. Ginseng is characterized by the presence of ginsenosides.

Siberian ginseng (*Eleutherococcus senticosus*) is not a ginseng at all. It is another adaptogen, but a different species named "Siberian ginseng" as a marketing ploy; instead of a fleshy root, it has a woody root; instead of ginsenosides, eleutherosides are present, (see below).

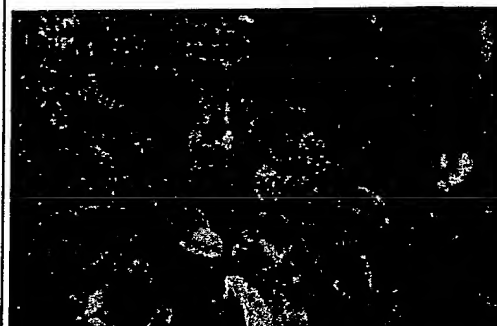
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Etymology

The English word ginseng derives from the Chinese term *rénshēn* (simplified: 人蔘; traditional: 人蔘), literally "man root" (referring to the root's characteristic forked shape, resembling the legs of a man). The difference between *rénshēn* and "ginseng" is explained by the fact that the English pronunciation derives from a Japanese reading of these Chinese

Ginseng



Panax quinquefolius foliage and fruit

Scientific classification

Kingdom: Plantae
 Division: Magnoliophyta
 Class: Magnoliopsida
 Order: Apiales
 Family: Araliaceae
 Subfamily: Aralioideae
 Genus: ***Panax***
 L.

Species

Subgenus *Panax*

Section *Panax*

Series *Notoginseng*
Panax
notoginseng

Series *Panax*
Panax
bipinnatifidus
Panax ginseng
Panax
japonicus
Panax
quinquefolius
Panax
vietnamensis
Panax
wangianus
Panax
zingiberensis

Section *Pseudoginseng*

characters. However, the current Japanese word for these characters 人參 (ninjin) means carrot, and ginseng is referred to in Japanese as 朝鮮人參 (chosen ninjin), adopting the name of the last dynasty of Korea 朝鮮 (Choson). The Korean name is 고려인삼 高麗人參 (goryo insam).

The botanical name *Panax* means "all-heal" in Greek, and was applied to this genus because Linnaeus was aware of its wide use in Chinese medicine.

Panax
pseudoginseng
Panax
stipuleanatus

Subgenus *Trifolius*

Panax trifolius

Traditional uses

Both American and *Panax* (Asian) ginseng roots are taken orally as adaptogens, aphrodisiacs, nourishing stimulants, and in the treatment of type II diabetes, including sexual dysfunction in men. The root is most often available in dried form, either in whole or sliced form. Ginseng leaf, although not as highly prized, is sometimes also used; as with the root it is most often available in dried form.

This ingredient may also be found in some popular Energy Drinks: usually the "tea" varieties or Functional Foods. Usually ginseng is in subclinical doses and it does not have measurable medicinal effects. It can be found in cosmetic preparations as well, with similar lack of effect. It is considered a wasteful use of important herbs by herbalists.

Ginseng root can be double steamed with chicken meat as a soup. (See samgyetang.)

Modern science and ginseng

As with herbalism in general, ginseng's medical efficacy remains controversial. It has been difficult to verify the medicinal benefits of ginseng using modern science, as there are contradictory results from different studies, possibly due to the wide variety and quality of ginseng used in studies. Another issue is the profit potential of corporate research since ginseng cannot be patented. As a result, high-quality studies of the effects of ginseng are rare, and one of the better studies involving ginseng actually uses a proprietary ginseng extract.^[1]

Ginseng is promoted as an adaptogen (a product that increases the body's resistance to stress), one which can to a certain extent be supported with reference to its anticarcinogenic and antioxidant properties,^[2] although animal experiments to determine whether longevity and health were increased in the presence of stress gave negative results.^[3]

A comparative, randomized and double-blind study at the National Autonomous University of Mexico does indicate it to be "a promising dietary supplement" when assessed for an increase in quality of life^[4]. It should be noted, however, that exclusion rates in this study were high. 124 participants were excluded from this study "due to lack of compliance with the treatment" whereas 164 participants in the control group and 338 participants in the ginseng group completed the study.

Panax ginseng appear to inhibit some characteristics associated with cancer in animal models; nevertheless, this effect is unclear in humans.^[5]

There are references in the literature, including seemingly authoritative compendiums that appear to

show interactions with ginseng. Herbalist Jonathan Treasure of the United States National Institute of Mental Health traces the growth of misinformation on an alleged adverse herb-drug interaction between the monoamine oxidase inhibitor phenelzine and Asian ginseng (*Panax ginseng* C.A. Meyer). This originally was mentioned in a 1985 editorial by Shader and Greenblatt in the *Journal of Clinical Psychopharmacology*. Shader and Greenblatt devoted a couple of lines to the case of 64 year-old woman who took an undisclosed dose for an undisclosed time of a dietary supplement product called "Natrol High" while concurrently taking phenelzine 60 mg qd. She experienced symptoms of "insomnia, headache, and tremulousness". Treasure contacted Natrol by email and discovered within ten minutes that there was no *Panax ginseng* in the formula, but instead *eleutherococcus* which was then called by the popular name "Siberian ginseng" and it was given in a subclinical dosage mixed with a variety of other herbs. The purported interaction effects are well-known side effects of phenelzine alone, which had been given in a high dosage and are not at all suggestive of *eleutherococcus*. However this misinformed article with a misidentified herb has been picked up in literature searches, megastudies and is now documented by conventional medical authorities such as Stockley's, and is repeated in several botanical monographs e.g. World Health Organization (WHO 1999).^{[6][7][8]}

Ginseng and reproductive activity

A 2002 study by the Southern Illinois University School of Medicine (published in the annals of the New York Academy of Sciences) found that in laboratory animals, both Asian and American forms of ginseng enhance libido and copulatory performance. These effects of ginseng may not be due to changes in hormone secretion, but to direct effects of ginseng, or its ginsenoside components, on the central nervous system and gonadal tissues^[9] In males, ginsenosides can facilitate penile erection.^[10] This is consistent with traditional Chinese medicine and Native American medicinal uses of ginseng.

Ginseng is known to contain phytoestrogens. PMID 12568360, PMID 12161497, PMID 12732291

Side effects

One of *Panax ginseng*'s most common side-effects is the inability to sleep.^[11] Other side-effects include nausea, diarrhea, euphoria, headaches, epistaxis, high blood pressure, low blood pressure, mastalgia, and excessive menstruation.^[12]

Overdose

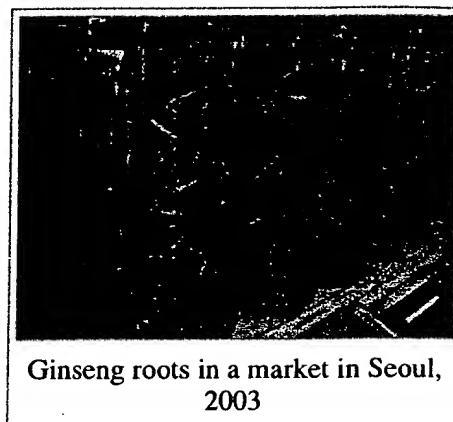
The common adaptogen ginsengs (*Panax ginseng* and *Panax quinquefolia*) are generally considered to be relatively safe even in large amounts.

Panax ginseng is not recommended within Chinese Medicine to be administered along with anti-infective herbs unless a person is quite debilitated, because of the fear that the pathogen will be tonified. Herbalists in China believed this and according to Xu Dachun in his brief essay on ginseng (1757 A.D., during the Qing Dynasty): "if one administers Ginseng of a purely supplementing nature, then one will merely supplement the evil influences and help them settle down. In minor cases, the evil influences will, as a result of such mistaken therapy, never leave the body again. In serious cases, death is inevitable."^[13]

Common classification

Panax quinquefolius American ginseng (root)

Ginseng that is produced in the United States and Canada is particularly prized in Chinese societies, and many ginseng packages are prominently colored red, white, and blue. According to Traditional Chinese Medicine, American Ginseng promotes Yin energy, cleans excess Yang in the body, calms the body. The reason it has been claimed that American ginseng promotes Yin (shadow, cold, negative, female) while East Asian ginseng promotes Yang (sunshine, hot, positive, male) is that, according to traditional Korean medicine, things living in cold places are strong in Yang and vice versa, so that the two are balanced. Chinese/Korean ginseng grows in northeast China and Korea, the coldest area known to many Koreans in traditional times. Thus, ginseng from there is supposed to be very *Yang*. Originally, American ginseng was imported into China via subtropical Guangzhou, the seaport next to Hong Kong, so Chinese doctors believed that American ginseng must be good for *Yin*, because it came from a hot area. However they did not know that American ginseng can only grow in temperate regions. Nonetheless the root is legitimately classified as more *Yin* because it generates fluids.^[14]



The two main components of ginseng are in different proportions in the Asian and American varieties, and may well be the cause the excitatory versus tonic natures.^[4]

The ginseng is sliced and a few slices are simmered in hot water to make a decoction. Most North American ginseng is produced in the Canadian provinces of Ontario and British Columbia and the American state of Wisconsin, according to Agri-food Canada. *P. quinquefolius* is now also grown in northern China.

A randomized, double-blind study shows that an extract of American ginseng reduces influenza cases in the elderly when compared to placebo.^[1]

Panax ginseng Asian ginseng (root)

According to Traditional Chinese Medicine Panax Ginseng promotes Yang energy, improves circulation, increases blood supply, revitalizes and aids recovery from weakness after illness, stimulates the body. Panax Ginseng is available in two forms:

The form called **white ginseng** is grown for four to six years, and then peeled and dried to reduce the water content to 12% or less. White Ginseng is air dried in the sun and may contain less of the therapeutic constituents. It is thought by some that enzymes contained in the root break down these constituents in the process of drying. Drying in the sun bleaches the root to a yellowish-white color.

The form called **red ginseng** is harvested after six years, is not peeled and is steam-cured, thereby giving them a glossy reddish-brown coloring. Steaming the root is thought to change its

biochemical composition and also to prevent the breakdown of the active ingredients. The roots are then dried.

Red ginseng

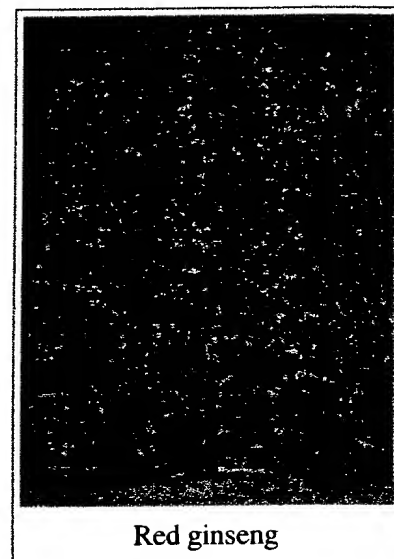
Red ginseng (Korean=홍삼, simplified Chinese: 红参; traditional Chinese: 紅蔘), is *Panax ginseng* that has been heated, either through steaming or sun-drying. It is frequently marinated in an herbal brew which results in the root becoming extremely brittle. This version of ginseng is traditionally associated with stimulating sexual function and increasing energy. Red ginseng is always produced from cultivated roots, usually from either China or South Korea.

In 2002, a preliminary double-blind, crossover study of Korean red ginseng's effects on impotence reported that it can be an effective alternative for treating male erectile dysfunction.^[15]

A study shows that Red ginseng reduces the relapse of gastric cancer versus control^[16]

A study of ginseng's effects on rats show that while both *White ginseng* and *Red ginseng* reduce the incidence of cancer, the effects appear to be greater with *Red ginseng*.^[17]

Falcarinol, a seventeen-carbon diene fatty alcohol was isolated from carrot and red ginseng, shown to have potent anticancer properties on primary mammary epithelial (breast cancer) cells.^[18] Other acetylenic fatty alcohols in ginseng (panaxacol, panaxydol, panaxytriol) have antibiotic properties.^[19]



Red ginseng

Wild ginseng

Wild ginseng is ginseng that has not been planted and cultivated domestically, rather it is that which grows naturally and is harvested from wherever it is found to be growing. It is considered to be superior to field farmed ginseng by various authorities, and it has been shown to contain higher levels of ginsenoside. Wild ginseng is relatively rare and even increasingly endangered, due in large part to high demand for the product in recent years, which has led to the wild plants being sought out and harvested faster than new ones can grow (it requires years for a ginseng root to reach maturity). Wild ginseng can be either Asian or American and can be processed to be red ginseng.

There are woods grown American ginseng programs in Maine, Tennessee, Virginia and North Carolina.^{[20][21]} and United Plant Savers has been encouraging the woods planting of ginseng both to restore natural habitats and to remove pressure from any remaining wild ginseng, and they offer both advice and sources of rootlets. Woods grown plants have comparable value to wild grown ginseng of similar age.

Ginseng alternatives

These mostly adaptogenic plants are sometimes referred to as ginsengs, but they are either from a different family or genus. Only Jiaogulan actually contains ginsenosides, although ginsenosides alone do not determine the effectiveness of ginseng. Since each of these plants have different uses, one should

research their properties before using. Descriptions and differentiation can be found in David Winston and Steven Maimes book *Adaptogens*^[22]

- *Gynostemma pentaphyllum* (Southern ginseng, aka Jiaogulan)
- *Eleutherococcus senticosus* (Siberian ginseng)
- *Pseudostellaria heterophylla* (Prince ginseng)
- *Withania somnifera* (Indian ginseng, aka Ashwagandha)
- *Pfaffia paniculata* (Brazilian ginseng)
- *Lepidium meyenii* (Peruvian ginseng, aka Maca)

Other plants which are referred to as ginsengs may not be adaptogens (although notoginseng is in the Panax family):

- *Angelica sinensis* (Female ginseng, aka Dong Quai)
- *Panax notoginseng* (San qi, hemostatic ingredient in Yunnan Bai Yao)

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See also

- Adaptogen
- Cold fX
- Eleutherococcus senticosus
- Chinese medicine
- Herbalism
- Food therapy
- Salvia miltiorrhiza "Poor man's ginseng"

External links

- Phytochemicals in Korean Ginseng
- The Journal of the American Botanical Council HerbalGram. 2003;57:35 American Botanical Council
- Overdose and Safety information
- Ginseng Abuse Syndrome disputed
- "Ginseng may reduce number, severity of colds". (Nov. 6, 2005). *New Sunday Times*, p. F19.
- Drugs & Supplements - Mayo Clinic
- Panax ginseng - American Family Physician

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Ashwagandha

From Wikipedia, the free encyclopedia

Ashwagandha (*Withania somnifera*), also known as **Indian ginseng**, **Winter cherry**, **Ajagandha**, **Kanaje Hindi** and **Samm Al Ferakh**, is a plant in *Solanaceae* or nightshade family.

It grows as a stout shrub that reaches a height of 170cm. Like the tomato which belongs to the same family, ashwagandha bears yellow flowers and red fruit, though its fruit is berry-like in size and shape. Ashwagandha grows prolifically in India, Pakistan, and Sri Lanka.

Contents

- 1 Medicinal use
 - 1.1 Active Constituents
- 2 History
- 3 Other species
- 4 References

Ashwagandha 	
Scientific classification	
Kingdom:	Plantae
Subkingdom:	Tracheobionta
Division:	Magnoliophyta
Class:	Magnoliopsida
Subclass:	Asteridae
Order:	Solanales
Family:	Solanaceae
Genus:	<i>Withania</i>
Species:	<i>W. somnifera</i>
Binomial name	
<i>Withania somnifera</i>	
L.	

Medicinal use

All parts of the plant are used in herbal medicine. In Ayurveda, the fresh roots are sometimes boiled in milk, prior to drying, in order to leach out undesirable constituents. The berries are used as a substitute for rennet, to coagulate milk in cheese making.

Ashwagandha in Sanskrit means "horse's smell", probably originating from the odor of its root which resembles that of sweaty horse.[1] The species name *somnifera* means "sleep-bearing" in Latin, indicating it was considered a sedative, but it has been also used for sexual vitality and as an adaptogen. Some herbalists refer to ashwagandha as Indian ginseng, since it is used in ayurvedic medicine in a way similar to that ginseng is used in traditional Chinese medicine.

The product called "ashwagandha oil" is a combination of ashwagandha with almond oil and rose water designed to be used as a facial toner, therefore should not be consumed. Nashi Widodo and co-workers in Tsukuba, Ibaraki (Japan) have now shown that an extract of ashwagandha acts as a tumor inhibitor, in the journal Clinical Cancer Research (April 2007).

Active Constituents

pyrazol Alkaloids, steroidal lactones, saponins, withanolides (Bone 1996: 137).

History

Robin Lane Fox, in his biography of Alexander the Great, claims *Withania somnifera* was used in wine in ancient times.

According to Anne Van Arsdall, *Withania somnifera* was called *apollinaris* and also *glofwyrt* in *The Old English Herbarium*, and had a legend that Apollo found it first and gave it to the healer Aesculapius. The main constituents of ashwagandha are alkaloids and steroidal lactones. Among the various alkaloids, withanine is the main constituent. The other alkaloids are somniferine, somnine, somniferinine, withananine, psuedo-withanine, tropine, psuedo-tropine, 3-a-gloyloxytropene, choline, cuscohygrine, isopelletierine, anaferine and anahydrine. Two acyl steryl glucoside viz. Sitoindoside VII and sitoindoside VIII have been isolated from root. The leaves contain steroidal lactones, which are commonly called Withanolides. The withanolides have C28 steroidal nucleus with C9 side chain, having six membered lactone ring.

Other species

There are over 20 other species of the *Withania* genus that occur in the dry parts of India, North Africa, Middle East, and the Mediterranean. These include *Withania coagulens* and *Withania simonii*, the roots of which are sometimes used interchangeably with those of *Withania somnifera*.

Withania somnifera itself has been extensively domesticated from the wild form. In India, at least five different cultivars have been developed for increased root size and adaptation to different climates.

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